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City of Detroit

CITY COUNCIL

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ANNE MARIE LANGAN
DEPUTY DIRECTOR
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TO: COUNCIL MEMBERS

FROM: Irvin Corley, Jr., Director ICJ.

DATE: May 9, 2008

RE: Resolution Approving Amendment of Swap Management Plan **(Recommend Approval, with Waiver of Reconsideration, but with one condition)** ***Line Item 14 on today's Budget, Finance and Audit Standing Committee Calendar***

I have received satisfactory responses to my questions on the amendment of the Swap Management Plan that is currently before the Budget, Finance and Audit Standing Committee. Responses to my questions are attached.

The amendment to the plan would sufficiently bring the plan up-to-date to reflect current market conditions in the swap market. In addition, the amended plan would reflect policies to ensure the City is meeting Standard & Poor's criteria regarding their evaluation of swaps during the rating process.

The one condition that needs addressing is the Law Department's sign off of the amended swap management plan, which was specifically requested for from Councilwoman Sheila Cockrel, chair of this standing committee.

Once Council receives the Law Department's sign off, I would recommend approval of the swap management plan amendment. The resolution authorizing the amendment is attached.

Attachments

cc: Council Divisions
Auditor General's Office
Norman White, Chief Financial Officer
Donita Crumpler, Manager II
Pamela Scales, Budget Director
Kerwin Wimberly, Mayor's Office

ICJ:I\CORLEY\Reso on Swap Management Plan Recom Approval May 2008.doc

TO: Irvin Corley, Jr., Director

FROM: Norman White, Chief Financial Officer

DATE: May 8, 2008

RE: Responses to additional Questions on Resolution Approving Amendment of SWAP Management Plan

Below are the responses to your first questions on the resolution referenced above.

As it relates to your response to questions 1. b., is the City now paying the lower variable rates, assuming these are lower than the synthetic swap rate when the swap was executed? Or, is the City paying the swap rate, even though the swap rate is higher than the variable rates at the time of June 30, 2006, and higher than the variable rates right now? Obviously, the response to this question just helps me to understand a little better how the swap agreement, which is predicated by the swap management policy, works.

The City pays the synthetic swap rate set at the execution of the swap agreement until the agreement is terminated or matures, no matter where current rates reset. The City is also paying the lower variable rate associated with the underlying bonds which are tied to the swap agreement, but to offset that payment, the City is receiving a variable rate payment from the swap agreement.

1. Please provide a copy of Standard & Poor's criteria regarding their evaluation of swaps during the rating process that serves as the basis for the revision to the existing (approved in 2002) swap management plan.

   See attached.

STANDARD &POOR'S | RATINGSDIRECT

Return to Regular Format

Research:

Public Finance Criteria: Debt Derivative Profiles

Publication date: 29-Sep-2004

Credit Analyst: Peter Block, Chicago (1) 312-233-7040; Eden Perry, New York (1) 212-438-7967; Colleen Woodell, New York (1) 212-438-2118; William Montrone, New York (1) 212-438-2062

Standard & Poor's Ratings Services is introducing Debt Derivative Profile (DDP) scores to provide the public finance market with a simple measure of the complexities of municipal debt-related derivatives by translating that exposure into an easily understandable measurement of risk.

Background

Over-the-counter debt derivatives, such as swaps and caps, have for decades been used as hedges in the capital markets, but appreciably by municipal issuers only in the last several years. Issuers, investors, regulators, and citizens have become increasingly focused on public purpose entities' involvement in what was once exclusively a corporate risk management tool. Many issuers—traditionally, fiscally conservative entities–spurred by a sluggish economy and rising expenses, have started to use derivatives as hedges to lower borrowing costs and reduce interest rate risk. As a fixed cost, debt service is a difficult budget item to control and swaps can provide some relief to both costs and tax law-limited refundings. Several states, including Pennsylvania, Michigan, and North Carolina, have granted statutory authority to local jurisdictions to enter into hedges for debt, further fueling the surge in municipal derivatives activity. In all cases, debt derivatives have altered the credit profiles of issuers–in some cases heightening risk, although in most cases reducing it.

Standard & Poor's developed DDP scores to enhance the transparency of municipal derivative structures and the impact on credit quality. Derivative impact is already part of Standard & Poor's analysis; the DDP scoring method incorporates existing municipal swap rating criteria and codifies that criteria into an easy-to-understand risk score. Scores range from 1 to 5, with 1 representing the lowest risk and 5 representing the highest risk. Although many factors are considered, the DDP scores principally indicate an issuer's potential financial loss from over-the-counter debt derivatives (swaps, caps, collars) due to early termination resulting from credit or economic reasons. DDPs will be integrated into Standard & Poor's rating analysis for swap-independent issuers and, as is now the case, can be a key financial rating factor. Standard & Poor's considers tax-secured GO bonds and general revenue bonds—health care, transportation, and utility–as swap-independent, as failure of the swap would not preclude the issuer from repaying its bonds. Swap dependent issuers, mostly housing and structured financings, are not eligible for DDPs since ratings on these transactions already incorporate cash flow stress testing of all derivative risks.

It is important to note that the expectation of public finance issuers is that swaps and other derivatives are used as hedges and will be related to debt instruments. Hedges are designed to offset risk. Derivatives entered into to generate revenues or relieve rate pressures are viewed as essentially gambling on interest rates and are viewed negatively in the overall analysis.

Scores and Interpretation

The Standard & Poor's DDP scoring system is composed of four components. Each will first be individually scored and then aggregated to reach the DDP:

- Issuer termination and collateral posting risk;
- Counterparty termination credit risk;
- Economic viability of the derivative portfolio; and
- Quality of swap and debt management policies and procedures.

Each of the factors will be scored on a scale of 1 to 5 and in most cases equally weighted at 25%. The DDP will be the weighted average score of the factors.

Final DDP scores of 1 and 2 indicate that the impact from debt derivatives on an issuer's financial profile is manageable and represents a neutral credit factor; a DDP of 3 indicates moderate credit risk,

while DDPs of 4 and 5 may be an indicator of increased credit risk. Depending upon other credit fundamentals, DDP scores of 3, 4, and 5 may influence the rating. Other factors that influence a DDP score include:

- Issuer's rating and outlook, which indicates the tolerance for a high DDP score;
- Swap exposure, which indicates the absolute level of involvement with swaps and, therefore, the overall importance of the DDP score. Swap exposure is defined for this purpose as total derivative notional divided by total debt outstanding.
- Value-at-risk vis-à-vis reserve levels, which is a stress test for the potential worst-case market value loss resulting from a derivatives trade. Value at risk is incorporated into the rating analysis if the DDP score indicates the potential for early termination; and
- Net variable rate exposure, which measures the potential risk to an issuer's revenue stream and reserve levels resulting from rising interest rates. The exposure ratio will be calculated on a current basis, although Standard & Poor's will use the net variable rate ratio to model "what-if" scenarios in order to gauge prospective levels of variable interest exposure, given either proposed derivatives structures or future bond issuance.

While there is no appropriate DDP score for any given rating level, issuer, or sector, Standard & Poor's expects investment grade issuers to have scores of 1, 2, or 3. While higher rated issuers could theoretically withstand higher DDP scores, a high DDP would likely be a negative rating factor for lower rated issuers.

Standard & Poor's considers issuer termination and collateral posting risk, along with counterparty termination risk, as the two most important factors influencing whether an issuer could experience a significant financial loss from derivatives. As municipal derivative durations are typically 20 and 30 years, however, the economic viability of an issuer's derivative structures and its management practices heavily influence the outcome of termination. Therefore, if one or more derivatives contracts are in danger of terminating, the DDP score will reflect the increased risk, placing more emphasis on the potential of early termination and less emphasis on management and economic viability.

Debt Derivative Profile Criteria

The Debt Derivative Profile (DDP) is a weighted average of four factors, each of which is scored on a scale from 1 (low risk) to 5 (high risk). To reach the overall score, each swap will be evaluated and then the DDP will be based on the aggregated swap scores. The four factors that comprise the DDP are:

- Issuer termination and collateral posting risk;
- Counterparty termination credit risk;
- Strength of the hedge and economic viability of the swap structure (basis risk); and
- Quality of swap and debt management policies and procedures.

Each scored factor is initially weighted at 25%. Weights may be changed if the potential credit and liquidity exposure to the issuer resulting from early swap termination is significant, since early termination poses financial risks to issuers that may be difficult to manage. Standard & Poor's believes that management experience and skill in negotiating and structuring a derivatives program is fundamental to ensuring a low DDP score. Therefore, it is likely that DDP scores equal to or above 4, which typically would include counterparty or termination risk scores of 4 or 5, would be reflective of management's philosophy on risk management and derivatives structures.

Termination/collateral posting risk.

Termination and collateral posting risk is based on the risk that the issuer defaults under the swap or triggers a collateral posting under credit support documents. As part of the financial analysis component of the bond rating, we will measure the risk that the issuer will be exposed to a credit or liquidity shortfall as a result of being forced to terminate the swap or post collateral. Analytically, collateral posting is equivalent to payment of termination fee due to the typically long-dated nature of municipal swaps and the restricted nature of collateral.

To determine a final termination and collateral risk score to be used in the DDP, Standard & Poor's will score and weight seven factors which could lead to, or exacerbate, a collateral posting by the issuer, or pose a threat for an early swap termination and payment of a termination fee.

The seven factors are

- The likelihood of an issuer triggering an event of default or termination or collateral posting, weighted 50% due to is significance to the analysis;
- The issuer's historical ratings volatility (number of rating or outlooks changes in last three years);
- Swap duration (less than 10 years, 10-15 years, 15-20 years, greater than 20 years);
- Termination payment methodology (first or second method, market quotation or loss);
- Cross default provisions (parity debt, subordinate debt, or other debt);
- Lien of termination payments (parity or subordinate);
- Source of termination payments (taxes, net revenues, etc.); and
- Provisions for payment of terminat ion fee (term-out or lump sum).

For this analysis, the issuer is assumed to have executed one International Swaps and Derivatives Association (ISDA) master agreement with each counterparty, necessitating only one termination risk score per counterparty. The final score for terminat ion and collateral posting risk will be the weighted average of each counterpar ty's ISDA swap document score, with weightings based on the total notional amount of swaps provided by a counte rparty relative to the issuer's total swap notional amount outstanding. Notional amount is used as a proxy for potential value at risk under the assumption that larger swap valuations would resu lt from relatively larger notional amounts and smaller swap valuations would result from relatively smaller notional amounts.

If an issuer has scored a 4 or 5 on any of its ISDA documents or on the termination risk score itself, Standard & Poor's will evaluate value-at-ris k under the applicable transaction(s) and compare it to the issuer's unrestricted reserv es; that financial analysis will be factored into the rating.

Half of the termination and collateral posting risk score reflects the likelihood of an issuer triggering an event of default or termination or collate ral posting. Of the myriad events of default and termination contained in a typical municipal interest rate swap, the "additional termination event" of a rating downgrade trigger or collateral posting are the most likely to occur. Standard & Poor's will score the likelihood of an issuer triggering termination or collateral posting based on the downgrade potential using Standard & Poor's rating transition data. The data will continually be updated through our CreditPro model. In the event that Standard & Poor's rating is not used as the trigger, Standard & Poor's will use the actual rating trigger (as opposed to one rating notch below the rating trigger) to determine the score. The scores will reflect the likelihood of triggering events based on the spread between the issuer's current rating and the potential for transitioning to the rating trigger level, rewarding issuers having a wide ratings trigger spread under the swap and penalizing issuers for having a narrow trigger spread.

Standard & Poor's expects that issuers rated in the 'A' and 'BBB' categories will post higher scores in this portion of the termination risk analysis because rating trigger minimu ms are typically 'BBB', which makes rating trigger spreads for these issuers narrow. In the rare event that an event of default or termination, other than the ratings trigger, is considered more likely to occur, Standard & Poor's will score event of default and termination a 5 based on the assumption that this event will occur over the life of the swap.

Standard & Poor's will assign the lowest scores for low ratings volatility, short swap duration (reduced likelihood of a rating transition), first method, market quotation termination calculation method, parity debt cross defaults, subordinate termination payment lien, and term-out structure for termination payments. Gradually higher scores are assigned for alternate options.

There may be mitigating factors which would warrant a termination risk score of 1 for any swap. These factors include:

- Issuer provides a non-reimbursab le insurance policy for swap termination payments from a 'AAA' or 'AA' rated monoline bond insurer;
- Issuer has an option to terminate the swap at any time at little or no cost; or
- There are no material events of default or termination under swap.

Counterparty risk.

Counterparty risk is scored based on the risk that a counterparty will default and terminate a swap and the issuer will lose a positive swap valuation, thereby diminishing its ability to replace its hedge position. Similar to the termination and collateral posting risk-scoring methodology, each counterparty is assumed to have executed one ISDA master agreement.

Like termination and collateral posting events discussed above, the "additiona l termination event" of a rating downgrade trigger or collateral posting by the counterparty are a real risk, particularly given the length of most contracts. The standard ISDA swap event of default and termination factors–failure to pay or deliver, misrepresentatio n, bankrupt cy, illegality, merger without assumption, and so forth-are permitted events for municipal swaps since they are already incorporated into counterparty ratings. Therefore, Standard & Poor's will score counterparty risk based on the potential for counterparty credit deterioration and default under the swap. Similar to issuer termination and collateral posting risk, Standard & Poor's will use rating transition data to dete rmine the likelihood of counterparty default. As discussed above, rating thresholds and the use of Standard & Poor's ratings will determine the measurement of the spread between actual ratings and default triggers; the narrower the spread, the higher the score will be. In essence, the scoring scale gives issuers credit for securing highly rated counterparties and penalizes issuers for securing lower rated counterparties. In addition, counterparty concentration will be reflected in the score. The counterparty concentration ratio is calculated by dividing total notional amount for any one swap provider by an issuer's total swap notional amount outstanding.

Many municipal swaps require counterparties to post collateral, secure third-party guarantees, or replace itself in the event of ratings downgrades , effectively mitigating counterparty credit risk. However, in absence of any such requirement, Standard & Poor's views positively issuers which seek replacement swap counterparties to the extent a counterparty is downgraded to the 'BBB' rating category. Acceptable collateral levels and colla teral posting methods are detailed in the article "Swap Counterparty and Collateral Criteria Expanded" (RatingsDirect, Jan. 13, 2004).

Mitigating factors, which would warr ant a counterparty termination risk score of 1, include if the swap is plain vanilla (highly liquid); and

- The counterparty has provided insurance for termination payments from a 'AAA' or 'AA' rated monoline bond insurer; or
- The counterparty must replace itself prior to being downgraded to 'BBB' with a higher rated counterparty, or
- The counterparty must collateralize prior to being downgraded to 'BBB'; or
- The counterparty will remain swap provider and produce a third-party guarantee rated at least 'BBB prior to being downgraded to 'BBB.'

Economic viability.

The issuer's swap portfolio structure is scored based on whether the issuer could have an incentive to restructure or voluntarily terminate a transac tion due to ineffectivene ss of the swap over the longer term. Standard & Poor's will stress test the issuer's hedges for economic viability through a basis exposure model, which measures payments from hedges versus payments due on bonds or versus expected returns (for basis trades). Assessment of long-term viabilit y of a hedge through economic cycles is important since the unwinding, restructuring, or execution of addi tional hedges is potentially costly and time cons uming, accompanied by real econo mic and opportunity costs. These costs are in addition to the additional, unexpected interest costs resulting from the ineffective hedges. For example, the recent and prolonged low interest rate environment has proven that certain derivative strategies once thought effective can quickly become ineffective. In the past year, a number of issuers have restructured or terminated LIBOR-based floating-to-fixed rate swaps (entered into only in the last five years) to reduce or eliminate basis exposure. The basis exposure occurred as the percentage of LI BOR paid under the swap to the issuer by the counterparty proved insufficient to properly hedge the associated variable rate tax-exempt Bond Market Association Municipal Swap Index (BMA)-based debt.

The initial weight of 25% for swap structure and economic viability reflects the potential for hedge ineffectiveness and voluntary termination of hedges. As previo usly mentioned, the economic viability weighting may be reduced since involuntary termination of the swap by either the issuer or counterparty represents a greater risk to the issuer's credit quality.

Hedge ineffectiveness of a swap portfolio is calculated through a proprietary basis exposure model, which incorporates Standard & Poor's stressful interest rate curves and tax-exempt bond price assumptions. The basis exposure for an issuer's swap portfolio is measured by a ratio equal to the average annual additional interest paid on bonds divided by total swap notional amount. Scores are assigned based on this ratio. The lower the basis exposure, the lower the score will be. Lower scores reflect the potential for higher economic viability for the issuer's swap structure while higher scores indicate lower economic viability over the longer term.

Management.

Management is scored based on Standard & Poor 's assessment of management experience and quality of its swap and debt management plan, using 10 factors including:

- Plan or policy on swaps and other debt related derivatives;
- Plan formally approved by governing body;
- Swap risks identified and discussed (oral or written);
- Annual management review of swaps;
- Comprehensive disclosure of swaps in audited financial statements;
- Valuation of swaps (semi-annual minimum);
- Counterparty diversification or minimum ratings policy;
- Optional swap termination policy;
- Collateral or insura nce policy; and
- Net variable rate exposure policy.

A comprehensive swap management plan will include the above considerat ion and should also include a discussion of risks and rewards of swaps and variable rate debt, senior management personnel responsible for monitoring swap risks, maximum level of variable rate debt and swap exposure, counterparty exposure limitations, collateral policies and procedures, and a detailed description of and rationale for all derivative transactions entered into or that are contemplated.

Management is initially weighted at 25%, but unde r the previously mentioned scenarios, may be reduced.

Additional Rating Factors

Swap/derivative exposure.

Standard & Poor's will calculate a swap exposure ratio for all swap-independent issuers in order to lend a contextual reference for the DDP score. For example, a DDP score of 3, 4, or 5 may not necessarily constitute a credit weakness if the issuer only has one debt derivative outstanding. The swap exposure ratio–calculate d by dividing total outstanding derivative notional amount by total outstanding issuer debt–is a proxy for an issuer's overall involvement with swaps and other derivatives. Derivative notional amounts will include all swaps, including floating-to-floa ting (basis) swaps, interest rate caps, and collars. Standar d & Poor's considers the swap exposure ratio a consistent measure of the size of an issuer's swap portfolio as opposed to mark-to-marke t or value-at-risk calculations. Valuations can fluctuate greatly based on interest rates, while the statistics used in the swap exposure ratio–swap notional and issuer debt amoun ts–do not exhibit the same volatility. Nevertheless, Standard & Poor's remain s concerned about an issuer's swap valuation, particularly if there is an impending termination of a swap.

Swap valuation.

An issuer's swap valuation is stress tested to determine the value-at-ris k (VAR). The VAR for derivatives will be factored into the rating analysis only if risk of de rivative terminati on is heightened, indicated either by a final DDP score of 4 or 5 or individual termina tion and counterparty risk scores of 4 or 5. Issuers engaging in derivative trans actions should be disclosing the derivative's fair valuation, or mark-to-marke t (MTM) in the notes to audited financi al statements in accordance with GASB's 2003 Technical Bulletin ("2003-01- Disclosur e Requirements for Derivatives Not Reported at Fair Value"). Using certain MTM data points, Standard & Poor's will ask the issuer to calculate a VAR for swaps which are in danger of terminat ing early (as indicated by a termination or counterparty risk score of 4 or 5), assuming a 200 basis point positive/ negative shift in interest rates. Standard & Poor's will use the worst-case VAR and measure it agai nst the issuer's unrestricted reserves to determine the credit impact of early, involuntary swap termin ation. Unle ss otherwise indicated by the issuer, Standard & Poor's assume s that voluntary swap terminations would occur only for a net economic benefit.

Net variable rate exposure.

In addition to swap exposure, Standard & Poor's will calculate net variable-rate interest exposure for use in conjunction with any DDP score. The net variable exposure measures the potential risk to an issuer's revenue stream and reserve levels resulti ng from rising variable rates. The exposure ratio will be calculated on a current basis, although Standard & Poor's will model "what-if" scenarios to gauge prospective levels of variable exposure, given either proposed derivatives structures or future bond issuance. For example, some issuers have entered into swaptions, which may become

effective in the future depending upon the level of interest rates. If Standard & Poor's is concerned that a counterparty may have an incentive to terminate a fixed-to-floating rate swaption on an issuer, Standard & Poor's will assess the potential exposure of future variable interest rates for the issuer through the net variable rate exposure calculation. Another example is an issuer that partially hedges a 30-year variable rate issue for 10 years with a floating-to-fixed rate swap. Through this simulation, Standard & Poor's is able to determine the impact of rollover risk, or the risk that the issuer will not be able to re-hedge its variable rate exposure upon expiration of the swap.

Conclusion

In an effort to hedge risks, many entities are entering into derivative instruments that have a long, successful history. Understanding the risks associated with these types of agreements is critical. With our DDP, Standard & Poor's will add an independent evaluation of the risks associated with certain derivatives and the potential impact on credit quality and ratings.

TO: Irvin Corley, Director

FROM: Roger Short, Finance

DATE: April 23, 2008

RE: Responses to questions on Resolution Approving Amendment of SWAP Management Plan

1. Contained in the 2006 CAFR is footnote III, B., 5. Derivatives Not Reported at Fair Value, which indicates the City entered into 34 separate fixed-payor interest rate swaps (going from variable-rate financings to fixed-rate financings) outstanding in order to better manage its interest rate exposure and to reduce its overall costs of financings (a copy of footnote is attached to this email). Of course, these swaps were entered into under the guidelines of the current 2002 swap management agreement.

   a. Did the City enter into any swap agreements since June 30, 2006? If so, please describe. Did any of these transactions involved swapping from fixed-rate instruments to variable-rate instruments due to market conditions?

      No

   b. Many of the 34 swaps are recorded at negative fair value at June 30, 2006. As alluded to in the footnote, were all negative fair values encountered by lower total interest payments required under the variable-rate financing, creating lower synthetic interest rates? (In my mind, this means the City can still pay at a variable rate if it is lower than the fixed rate entered into under a swap agreement).

      This means that the synthetic swap rate (assuming each trade was executed at June 30) was lower than the actual synthetic rates on each swap. In theory, interest rates are lower now than when the swaps were executed and thus it could be that short-term rates associated with the underlying variable rate bonds are low as well.

2. Please describe what new market practices are a part of the updated swap management plan.

   The new practices relate to the criteria released by Standard & Poor's regarding their evaluation of swaps during the rating process. The City in the execution of its swaps has followed the criteria in the report, but the City wanted to be specific in its description and explanation of these criteria.

3. What ambiguities in the existing 2002 plan are being cleared up in the updated swap plan?

   The specific monitoring of the City's existing swaps and swap counterparties and how the diversification of the counterparty exposure is handled. In addition, the execution of forward starting swaps and the treatment of the related bond issues are implicit in the policy. The amendments make this execution and treatment explicit.

4. Is the plan being updated to comply with any GASB pronouncements? If so, which ones?

   All GASB related announcements are already included in the plan.

5. Given current market conditions, can the City tweak any existing swap agreements to lower City interest costs/investment risk?

   Not at this time

6. Given current market conditions, are you looking to bring to Council soon any new swap agreements to lower interest costs/risks associated with any existing bonds or financial instruments?

   Not at this time

7. Page 4 of 9 of the swap management plan acknowledges the "International Swap and Derivatives Association Master Agreement". Is this an industry wide agreement that provides guidelines for swap agreements? Does this agreement need to come to Council for approval, too, since it is referenced in the swap management plan?

   Each swap that has been executed by the City has the International Swap and Derivatives Association Master Agreement ("ISDA") included, as such the ISDA has been approved by Council.

CITY OF DETROIT
FINANCE DEPARTMENT

BUDGET,
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March 27, 2008

Honorable City Council:

RE: Resolution approving amendment of swap management plan

In November 2002, your Honorable Body approved the City of Detroit, Michigan swap management plan (the "Plan") to comply with the requirements of the revised Municipal Finance Act, being MCL 141.2317.

The attached resolution updates the swap management plan to reflect market practice and clarification of some ambiguities in the 2002 plan.

I recommend its adoption by your Honorable Body, **with waiver of reconsideration**, at your next formal session.

Respectively submitted,

Norman L. White
Finance Director

NLW/dc

Cc: Kerwin Wimberley
Irvin Corley
David Whitaker

DETROIT
CITY CLERK
2008 APR -3 A 10:09

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DETROIT AUTHORIZING REVISED SWAP MANAGEMENT PLAN

By Council Member _____:

WHEREAS, the State has enacted Act 34, Public Acts of 2001, as amended ("Act 34") relative, inter alia, to the borrowing of money and the issuance of certain debt and securities, to provide for tax levies, to authorize the issuance of certain debt and securities and to generally govern municipal finance practices in the State; and

WHEREAS, the City is defined to be a "municipality" under Act 34 that has the power to issue to enter into swap transactions from time to time to better manage assets and liabilities and to take advantage of market conditions to lower overall costs and reduce interest rate risk under the provisions of Act 34; and

WHEREAS, this City Council has been advised by the Finance Director of the City that subject to an annual review that the swap management plan be updated to reflect current market practices and clarify some ambiguities in the original plan; and

WHEREAS, under Act 34, this City Council may adopt a resolution authorizing the revision of the swap management plan

NOW, THEREFORE, be it resolved that:

1. The City Council of the City of Detroit has been advised by the Finance Director that the swap management plan be updated to reflect current market practices and clarify some ambiguities in the original plan.
2. The City Council of the City of Detroit authorizes the form of the swap management plan attached to the resolution.
3. All other ordinances, resolutions or orders, or parts thereof, in conflict with the provisions of this Resolution are, to the extent of such conflict, hereby repealed.
4. The paragraph headings in this Resolution are furnished for convenience of reference only and shall not be considered to be part of this Resolution.
5. This Resolution shall be effective immediately upon adoption.

CITY OF DETROIT, MICHIGAN

SWAP MANAGEMENT PLAN

1. Authority

The City of Detroit (the "City") is authorized by the Revised Municipal Finance Act, MCL 141.2317, to enter into swap transactions from time to time to better manage assets and liabilities and take advantage of market conditions to lower overall costs and reduce interest rate risk. This Plan is adopted to comply with the requirements of MCL 141.2317, as amended.

This sets forth the manner of execution of swaps and related agreements, provides for security and payment provisions, and sets forth certain other provisions related to swap agreements between the City and qualified swap counterparties.

2. Purpose

The incurring of obligations by the City involves a variety of interest rate payments and other risks that a variety of financial instruments are available to offset, hedge, or reduce. It is the policy of the City to utilize such financial instruments to better manage its assets and liabilities.

Swaps may be utilized for the following purposes:

1. To achieve significant savings as compared to a product available in the fixed income market. Significant savings shall be calculated after adjusting for (a) applicable fees, including takedown, remarketing fees and credit enhancement fees and (b) call options that may be available on the bonds or the swap, and (c) the application of tax risk and basis risk. Examples may include synthetic fixed rate debt and synthetic variable rate debt using common indexes. Alternatively, significant savings are deemed to occur if the use of derivatives helps to achieve investor diversification of a particular bond offering.

2. To prudently hedge risk in the context of a particular financing program or the overall asset/liability management of the City. Examples may include buying interest rate caps and entering into forward starting swaps.

3. To incur variable rate exposure within prudent guidelines, such as selling interest rate caps or entering into a swap in which the City's payment obligation is floating rate.

4. To achieve more flexibility in meeting overall financial objectives than available in conventional markets. In connection with using swaps to efficiently execute refundings or forward refundings, the City will determine whether to take the savings over the life of the refunding bonds, or as an upfront payment.

5. To reverse the effect of a swap already in place.

6. To obtain interest rate savings in a forward refunding, including the use of swaptions to obtain the savings in targeted years.

The City may execute interest rate swaps if the transaction can be expected to result in the following:

- Reduced exposure to changes in interest rates on a particular financial transaction or in the context of the management of interest rate risk derived from the City's overall asset/liability balance;
- Result in a lower net cost of borrowing with respect to the City's debt or achieve a higher net rate of return on investments made in connection with, or incidental to the issuance, incurring, or carrying of the City's obligations or other City investments; and,
- Manage variable interest rate exposure consistent with prudent debt practices.

The City shall not enter into interest rate swaps for speculative purposes.

In evaluating a particular transaction involving the use of Swap Agreements, the City shall review the long-term implications associated with entering into Swap Agreements, including costs of borrowing, historical interest rate trends, variable rate capacity, credit enhancement capacity, opportunities to refund related debt obligations and other similar considerations. The City shall also make a determination that the form of the Swap Agreement is suitable to the issuing body. This shall take into consideration, among other things, the certainty of the revenue streams to support debt service, the historical performance of the revenues, and the ability to manage basis risk and to make termination payments, if necessary.

3. Credit Factors of Swaps

Before entering into a Swap Agreement, the City shall evaluate all the risks inherent in the transaction. The risks to be evaluated could include:

1. Counterparty risk- The risk that the counterparty fails to meet its obligations under the agreement. This will be monitored with respect to rating actions and general performance under the agreement. This risk can be mitigated by setting minimum credit quality criteria for counterparties, and including into the swap documentation a

counterparty collateral requirement upon a credit rating downgrade below a specific threshold. In addition, the City should establish minimum rating level that would trigger an automatic termination only remedied by the replacement of the Counterparty or the addition of a highly rated credit support provider.

2. Basis risk/Tax Event risk- The potential mismatch between receipts under the agreement and payments required to be made to bondholders. Also, the risk stemming from a change in the marginal income tax rate that would effect the relationship between the underlying bonds (tax-exempt) and the variable leg of the swap (taxable). The City is structuring its floating receipts under a swap to mitigate this risk, and will only enter into swaps with such risks when the fixed rate has been sufficiently reduced to make it worth the added risk. The City will also consider purchasing cancellation provisions at par to manage such risks as its books more swaps. If the City is taking basis risk, it will include an appropriate amount in its debt service budgets for such risk.

3. Termination risk- The risk that the counterparty will terminate the agreement prior to maturity in a market unfavorable to the City. In its documentation, the City will create favorable termination provisions, including asymmetric rating triggers, the use of the corporate equivalent rating, purchasing swap insurance (including termination), and incorporating general terms designed to limit the likelihood of an adverse termination.

   Before entering into a transaction, the City will identify potential funding sources for a potential termination payment, including funding the amount as part of a refunding of the underlying bonds. The City will also seek to negotiate provisions in the underlying documents that allow any termination payments to be made over a period of time (to permit time for a refunding or appropriations to its annual budget).

4. Rollover risk- The mismatch between the expiration of the agreement and the maturity of the underlying bonds. This risk can be eliminated by making the swap coterminous with the bonds. The City may consider swaps that can be cancelled early or are not coterminous with the bonds, if it determines that the result of an unhedged position or the process of rehedging would not be disadvantageous to the City.

5. Amortization risk- The mismatch between the amortization schedule established under the interest rate exchange agreement and the amortization schedule of the bonds. Other than an earlier termination (maturity) of a swap, the City will generally attempt to match the amortization of its bonds with the decline in the notional amount of the related swap.

6. Credit risk – The occurrence of an event modifying the credit rating of the issuer or its counterparty. This should be addressed through minimizing cross defaults, the

use of swap insurance and the favorable negotiation of credit event triggers in the underlying documentation.

7. Operational risk – The need for internal staffing expertise to develop documentation, assess pricing (including an assessment of the potential costs of non-standardized documentation), monitor rates, calculate and make payments and institute proper accounting and budgeting methodology. To address this risk the City places responsibility for swap documentation with senior accounting staff and will provide necessary training for both management and accounting personnel. The City also uses the services of a experienced swap advisor for the negotiation of documents, verification of "mid" pricing for all swaps as well as "fair and reasonable" spreads for counterparties and the continuous monitoring of existing swaps on a monthly basis..

The City shall endeavor to diversify its exposure to counterparties. To that end, before entering into a transaction, it should determine its exposure to the relevant counterparty or counterparties and determine how the proposed transaction would affect the exposure. The exposure should not be measured solely in terms of notional amount, but rather how changes in interest rates would affect the City's exposure ("Value at Risk") overall and to each counterparty. The Value at Risk should be based on all outstanding derivative transactions by the City. The City may also elect to take into account the exposure of each enterprise fund of the City and any other related entities to a particular counterparty.

4. Form of Swap Agreements

To the extent possible, the Swap Agreements entered into by the City shall contain the terms and conditions set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, including any schedules and confirmation. The schedule should be modified to reflect specific legal requirements and business terms desired by the City. If possible, the City should attempt to negotiate the master agreement and schedule with qualified counterparties to facilitate competitive bidding and the ability to use derivatives in situations in which their use is desirable.

The City shall consider including provisions that permit it to assign its rights and obligations under the Swap Agreement and to optionally terminate the agreement at its market value at any time in its sole discretion.

Events of Default. ***Events of default of a counterparty shall include the following:***

1. Failure to make payments when due
2. Material breach of representation and warranties
3. Failure to comply with downgrade provisions
4. Failure to comply with any other provisions of the agreement after a specified notice period

Each interest rate swap executed by the City shall contain terms and conditions as set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, including any schedules and confirmations and the terms required by MCL 141.2317, as amended. In case of a conflict, terms required by the statute shall prevail over the terms of the ISDA Master Agreement. The swap agreements between the City and each qualified swap counterparty shall include payment, term, security, collateral, default, remedy, termination, and other terms, conditions and provisions as the Finance Director deems necessary or desirable.

5. Qualified Swap Counterparties

The City shall be authorized to enter into interest swap transactions only with qualified swap counterparties rated at least "A", or equivalent by any two of the nationally recognized rating agencies (e.g. Moody's, Standard and Poor's, or Fitch); or a "AAA" subsidiary as rated by at least one nationally recognized credit rating agency. In addition, the counterparty must have a demonstrated record of successfully executing swap transactions as well as creating and implementing innovative ideas in the swap market. Each counterparty shall have minimum capitalization of at least $150 million.

The City may negotiate or competitively bid an interest rate swap transaction at the Finance Director's discretion. In connection with the City's entrance into a swap agreement, the Finance Director shall execute a certificate; to be kept with the swap transaction documents; to the effect that such swap agreement is in compliance with this Swap Management Plan. Any swap agreement entered into by the Finance Director, pursuant to authorization by City Council, shall constitute a swap agreement that meets the requirements of MCL 141.2317(7)(a).

Regardless of the method of procurement, the City expects to use either a financial advisor and or a swap advisor to obtain an independent finding that the rates, terms, and conditions of the Swap Agreement reflect a fair market value of such agreement, and certify thereto as of the date of its execution.

If after entering into an agreement the ratings of the counterparty or, if applicable, its guarantor are downgraded below the required ratings, then the agreement shall be subject to termination (an Additional Termination Event), unless (a) the counterparty provides either a substitute guarantor or assigns the agreement, in either case, to a party reasonably acceptable to the City meeting the rating requirements or (b) the counterparty (or guarantor) collateralizes the Swap Agreement in accordance with the provisions set forth in these guidelines and in the Swap Agreement (cash and investments under one year at 100%, over one year to maturity at least 102%, MTM weekly) and held by a separate custodian.

1. Counterparty Credit Standards. Many derivative products create for the City a continuing exposure to the credit worthiness of financial institutions that serve as the

City's counterparties on derivative transactions. To protect the City's interests in the event of a credit problem, the City will take a three-tiered approach:

2. Use of high rated counterparties: Standards of creditworthiness, as measured by the credit ratings, will determine eligible counterparties. Differing standards may be employed depending on the program, term, size and interest-rate sensitivity of a transaction, types of counterparty, and potential for impact on the City's or a specific indenture's credit ratings.

3. Collateralization on downgrade: If a counterparty's credit rating is downgraded below a specified threshold, the City will require that its exposure to the counterparty be collateralized as per an ISDA Credit Support Annex.

4. Termination: If counterparty's credit is downgraded below a second (lower) threshold; the City may exercise a right to terminate the transaction prior to its scheduled termination date. The City will seek to require, whenever possible, that terminations triggered by a counterparty credit downgrade will occur on the side of the bid-offered spread which is most beneficial to the City, and which would allow the City to go back into the market to replace the downgraded party with another suitable counterparty at little or no out-of-pocket cost to the City.

6. Aspects of Risk Exposure Associated with Swaps

Before entering into a swap, the City shall evaluate all the risks inherent in the transaction. These risks to be evaluated should include counterparty risk, termination risk, rollover risk, basis risk, tax event and amortization risk.

The City shall endeavor to diversify its exposure to counterparties. To that end, before entering into a transaction, it should determine its exposure to the relevant counterparty or counterparties and determine how the proposed transaction would affect the exposure. The Finance Director will determine how much exposure the City will have to any single counterparty. The exposure should not be measured solely in terms of notional amount, but rather how changes in interest rates would affect the City's exposure ("Value at Risk"). The Value at Risk should be based on all outstanding derivative transactions by the City. The City may also elect to take into account the exposure of the City and all related entities to a particular counterparty.

7. Termination Provisions

The City shall consider including in all swap transactions provisions granting the City the right to optionally terminate a swap agreement at any time over the term of the agreement. Furthermore the City may enter into swaps that grant optionality to either party pursuant to the terms of the swap contract. The Finance Director shall determine if it is financially advantageous for the City to terminate a swap agreement.

Mandatory Termination: A termination payment to or from the City may be required in the event of termination of a swap agreement due to a default or a decrease in credit rating of either the City or the counterparty. It is the intent of the City not to make a termination payment to a counterparty that does not meet its contractual obligations. Prior to making any such termination payment, the Finance Director shall evaluate whether it is financially advantageous for the City to obtain replacement counterparty to avoid making such termination payment.

The City will also provide that termination payments are subordinate to its regularly scheduled swap payments

8. Term and Notional Amount of Swap Agreement

The Finance Director shall determine the appropriate term for an interest rate swap agreement on a case-by-case basis. The slope of the swap curve, the marginal change in swap rates from year to year along the swap curve, and the impact that the term of the swap has on the overall exposure of the City shall be considered in determining the appropriate term of any swap agreement. In connection with the issuance or carrying of bonds, the term of a swap agreement between the City and a qualified swap counterparty shall not extend beyond the final maturity date of existing debt of the City, or in the case of a refunding transaction, beyond the final maturity date of the refunding bonds.

At no time shall the total notional amount of all swaps exceed one half of the total amount of outstanding bonds related to the City or within an enterprise fund of the City.

9. Swap Counterparty Exposure Limits

In order to diversify the City's counterparty risk, and to limit the City's credit exposure to any one counterparty, limits will be established by the Finance Director based in part upon the credit rating of the counterparty as well as the relative level of risk associated with each existing swap transaction.

10. Collateral Requirements

As part of any swap agreement, the City may require collateralization or other credit enhancement to secure any or all swap payment obligations. As appropriate, the Finance Director may require collateral or other credit enhancement to be posted by each swap counterparty under the following circumstances:

- Each counterparty to the City may be required to post collateral if the credit rating of the counterparty or parent falls below the "A" category. Additional collateral for further decreases in credit ratings of each counterparty shall be

posted by each counterparty in accordance with the provisions contained in the collateral support agreement to each swap agreement with the City.

- Collateral shall consist of cash, U.S. Treasury securities and Federal agency securities.
- Collateral shall be deposited with a third party trustee, or as mutually agreed upon between the City and each counterparty.
- A list of acceptable securities that may be posted as collateral and the valuation of such collateral will be determined and mutually agreed upon during negotiation of the swap agreement with each swap counterparty.
- The market value of the collateral shall be determined on at least a monthly basis.
- The City will determine reasonable threshold limits for the initial deposit and for increments of collateral posting thereafter.
- The Finance Director shall determine on a case by case basis whether other forms of credit enhancement are more beneficial to the City

11. Record Keeping

Written records noting the status of all interest rate swap agreements will be maintained by the Finance Director and shall include the following information:

1. Highlights of all material changes to swap agreements or new swap agreements entered into by the City since the last report.
2. Market value of each of the City's interest rate swap agreements.
3. For each counterparty, the City shall provide the total notional amount position, the average life of each swap agreement, the available capacity to enter into a swap transaction, and the remaining term of each swap agreement.
4. The credit rating of each swap counterparty and credit enhancer insuring swap payments.
5. Actual collateral posting by swap counterparty, if any, per swap agreement and in total by swap counterparty.
6. A summary of each swap agreement, including but not limited to the type of swap, the rates paid by the City and received by the City, and other terms.
7. Information concerning any default by a swap counterparty to the City, and the results of the default, including but not limited to the financial impact to the City, if any.
8. Summaries of any swap agreements that were terminated.

12. Reporting

Any interest rate swap agreement entered into by the City under this Swap Management Plan shall be described in the City's audited Comprehensive Annual

Report filed with the Michigan Department of Treasury under the Uniform Budgeting and Accounting Act, MCL 141.421 to 141.440a.

13. Compliance with Laws

Swap agreements and related bond sales shall be subject to all the regular approvals and authorizations required under federal, state and local laws.

The Finance Director will review the policy annually and recommend any changes to the Detroit City Council.